

16240500 WAIAKEAKUA STREAM AT HONOLULU

LOCATION.--Lat 21°19'52", long 157°48'08", Hydrologic Unit 20060000, on right bank 5 ft downstream from bridge on Waaloa Way, 500 ft upstream from confluence with Waihi Stream, and 4.2 mi northeast of Honolulu Post Office.

DRAINAGE AREA.--1.06 mi².

PERIOD OF RECORD.--May 1913 to January 1921, August 1925 to current year. Prior to July 1960, published as East Branch Manoa Stream near Honolulu.

REVISED RECORDS.--WSP 1319: 1919(M), 1930-33(M). WSP 1569: Drainage area. WSP 1937: 1949(M), 1960(M).

GAGE.--Water-stage recorder and combination Parshall flume and concrete weir. Datum of gage is 294.50 ft above mean sea level (Honolulu Board of Water Supply benchmark). Prior to May 20, 1914, nonrecording gage at site 200 ft upstream at different datum. May 20, 1914 to January 16, 1921, water-stage recorder at site 30 ft upstream at different datum. August 18, 1925 to March 15, 1928, water-stage recorder at present site at datum 2.99 ft lower. March 16, 1928 to October 18, 1933, water-stage recorder at present site at datum 0.41 ft higher.

REMARKS.--Records computed by Heather Jeppesen. Records fair. Honolulu Board of Water Supply at times diverts a small amount of ground water from tunnel upstream of station. Occasional small diversions for irrigation upstream of station.

AVERAGE DISCHARGE.--84 years (water years 1914-20, 1926-2002), 4.85 ft³/s (3,510 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,090 ft³/s, January 16, 1921, gage height, 10.4 ft, from floodmarks, site and datum then in use, from rating curve extended above 58 ft³/s; minimum, 0.6 ft³/s, June 7, 8, 1926.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 310 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 26	1730	1,050	4.20	May 6	1015	383	3.20
Jan 29	0530	*1,090	*4.25				

Minimum daily discharge, 1.6 ft³/s, Jan. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	2.7	2.9	2.1	6.2	2.5	2.6	2.9	2.6	5.3	2.5	3.0
2	3.4	2.5	2.2	2.1	4.9	2.7	2.6	2.8	2.5	4.9	2.4	3.2
3	2.7	2.8	2.1	2.1	3.9	2.7	2.6	2.7	2.7	3.1	2.6	2.7
4	3.6	3.4	2.2	2.1	18	2.6	2.7	3.2	2.6	2.5	3.0	2.8
5	14	2.6	2.5	2.1	6.9	4.6	2.8	11	2.5	2.3	2.6	2.4
6	3.2	8.7	8.2	2.2	4.4	21	2.6	47	2.7	2.3	2.8	2.3
7	9.5	23	2.7	2.1	3.7	13	2.7	36	2.5	2.9	3.6	2.3
8	3.3	7.9	2.6	1.9	11	4.3	2.5	8.3	2.5	3.2	2.7	2.6
9	2.8	3.2	2.5	1.7	4.6	12	2.6	6.1	2.5	2.9	2.4	2.3
10	2.6	2.6	2.3	1.8	3.4	6.4	2.5	6.6	2.8	3.7	2.4	2.2
11	2.4	2.5	2.3	1.7	3.4	4.2	2.5	4.8	3.2	3.0	3.4	2.5
12	2.1	2.1	2.2	1.7	5.6	3.8	2.5	5.0	2.6	2.8	5.2	2.5
13	2.5	5.9	5.0	1.7	13	3.9	2.5	4.9	2.4	2.5	2.8	2.2
14	2.0	2.6	3.4	1.8	3.9	3.6	2.4	3.9	2.4	2.6	2.6	2.1
15	2.4	2.2	4.2	1.7	7.0	4.1	2.4	3.4	2.5	2.5	2.4	2.4
16	2.1	2.1	2.7	1.6	3.6	3.7	2.4	3.2	2.4	2.5	2.3	2.2
17	1.9	2.0	2.5	1.7	3.2	10	3.8	3.1	2.5	2.4	2.2	2.0
18	1.9	2.0	2.6	2.5	3.0	4.3	3.5	3.6	3.1	2.9	2.1	3.9
19	1.9	2.0	5.4	2.2	2.9	3.6	2.5	6.7	3.7	6.2	2.2	4.1
20	1.8	1.9	5.5	5.3	2.8	3.5	8.0	6.5	2.6	3.0	2.2	2.3
21	2.0	1.9	3.1	9.1	2.8	3.2	3.4	4.4	3.2	5.0	2.1	2.2
22	2.2	1.9	2.7	4.7	2.7	3.0	2.8	3.6	6.3	5.2	2.0	2.1
23	2.0	1.8	6.4	2.6	2.7	3.0	2.6	3.1	2.8	3.1	2.7	2.0
24	1.8	1.8	5.5	2.1	2.7	2.9	2.6	3.0	3.9	2.9	4.5	2.0
25	2.7	1.8	2.9	3.0	3.5	2.9	3.4	2.9	2.5	2.6	3.4	1.9
26	2.0	1.8	2.6	67	2.7	2.9	3.8	2.9	2.3	2.8	2.6	1.9
27	3.1	21	2.3	19	2.6	2.9	3.4	2.8	2.3	3.0	2.7	1.8
28	7.9	3.5	2.2	8.4	2.5	2.9	3.3	2.8	2.2	3.1	3.8	1.8
29	2.4	2.5	3.4	80	---	3.9	4.5	2.8	2.2	3.4	2.9	1.8
30	2.0	2.5	2.1	8.8	---	3.2	3.1	2.7	2.8	3.7	8.8	1.9
31	2.9	---	2.2	14	---	2.8	---	2.6	---	2.7	4.1	---
TOTAL	109.1	125.2	101.4	260.8	137.6	150.1	91.6	205.3	83.8	101.0	94.0	71.4
MEAN	3.52	4.17	3.27	8.41	4.91	4.84	3.05	6.62	2.79	3.26	3.03	2.38
MAX	14	23	8.2	80	18	21	8.0	47	6.3	6.2	8.8	4.1
MIN	1.8	1.8	2.1	1.6	2.5	2.5	2.4	2.6	2.2	2.3	2.0	1.8
AC-FT	216	248	201	517	273	298	182	407	166	200	186	142

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 2002, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)
	4.16	10.7	1.18	1915	5.22	18.1	1.17	1928	5.28	15.5	1.42	1988
	4.94	14.8	1.28	1915	4.44	15.6	1.03	1920	4.44	15.6	1.03	1920
	5.35	19.5	1.14	1942	5.35	19.5	1.14	1926	5.60	17.5	0.87	1926
	5.60	17.5	1.16	1989	5.11	13.3	0.87	1920	4.14	10.3	0.87	1920
	5.11	13.3	0.87	1988	4.89	12.3	0.87	1926	4.79	13.6	1.31	1984
	4.14	10.3	0.87	1938	4.79	13.6	1.31	1984	4.14	13.3	1.27	1984
	4.89	12.3	0.87	1958	4.79	13.6	1.31	1984	4.14	13.3	1.27	1984

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1913 - 2002	
ANNUAL TOTAL	1135.2		1531.3			
ANNUAL MEAN	3.11		4.20		4.85	
HIGHEST ANNUAL MEAN					8.23	1988
LOWEST ANNUAL MEAN					1.94	1920
HIGHEST DAILY MEAN	39	Jun 5	80	Jan 29	183	Mar 24 1994
LOWEST DAILY MEAN	1.3	Jul 28	1.6	Jan 16	0.62	Feb 26 1920
ANNUAL SEVEN-DAY MINIMUM	1.5	Jul 6	1.7	Jan 11	0.75	May 23 1926
ANNUAL RUNOFF (AC-FT)	2250		3040		3510	
10 PERCENT EXCEEDS	4.9		6.3		8.0	
50 PERCENT EXCEEDS	2.3		2.7		3.5	
90 PERCENT EXCEEDS	1.6		2.0		1.8	

HAWAII, ISLAND OF OAHU
 16240500 WAIAKEAKUA STREAM AT HONOLULU--Continued

